

REQUEST FOR PROPOSALS
LOUISIANA TRANSPORTATION RESEARCH CENTER
LTRC PROJECT NO. 12-5PF, SIO NO. 30000543

SOUTHEASTERN TRANSPORTATION CONSORTIUM
SYNTHESES OF RESEARCH RESULTS

Water Quality Management at Construction Sites

PROBLEM STATEMENT

Erosion during and after construction of roads, highways, and bridges can contribute large amounts of sediment to runoff waters, which can deteriorate water quality. In 2009, the EPA finalized and published a rule in the Federal Register establishing non-numeric and, for the first time, numeric effluent limitation guidelines (ELGs). The numeric ELGs include turbidity limits and sampling requirements for storm water discharges from construction sites.

State Departments of Transportation (DOTs) are required to minimize water quality impacts of road construction. Water quality impacts are managed when performing work in and around bodies of water by using construction best management practices that minimize sediment loss from a project. DOTs or their contractors design erosion and sediment control plans for land disturbing activities. These plans are based on many factors such as construction operations and sequencing, existing topography, proposed land grades, soil type, classifications of surrounding waters, critical habitat areas, and any environmental concerns. States are also subject to respective state regulations and are required to take various preventative and corrective measures at construction sites. Several research projects have focused on improved methods for compliance with EPA standards. New methods are continually devised to accommodate the challenges of roadway construction to minimize these impacts.

This synthesis will summarize the results of research on water quality impacts at construction sites, best practices and implementation status. Deliverables should include recommended successful compliance strategies and/or additional research if needed.

INFORMATION SOURCES

- STC website project database
- NCHRP, TRID, State DOTs
- State specifications, design methods, characterization tools, QA-QC inspection and testing, and preferred construction methods should be explored.

BACKGROUND

The Southeast Transportation Consortium (STC) was formed to encourage coordination among member states and provide resources and management of collaborative studies. The states' transportation research programs collectively offer a broad range of talent and expertise. One of the consortium's goals is to reduce duplication of research and provide means for better communication of research activities in the state research programs. The cooperative and collaborative objectives of the STC program are to develop synergy and provide for a more efficient use of resources.

State research programs are driven by policy makers to solve transportation problems that exist in that state. However, there are many transportation issues that are universal to all states. In order to reduce redundancy of state research projects and promote transfer of knowledge on completed research, there

exists a need to classify and quantify the focus, status and implementation of all member state research projects and programs.

OBJECTIVE

Syntheses are technical summaries of research performed and state-of-the-practice reports prepared under contract by outside individuals or firms. These reports are oriented toward practical solutions of specific transportation problems. The specific objectives of this synthesis are:

1. To focus on research projects conducted in the southeast region (i.e. SASHTO states) on a specific synthesis topic and issues;
2. To perform a literature search on the synthesis topic to identify other on-going or completed research;
3. To review the commonality of project scopes and methodology of studies performed in the STC region;
4. To review the commonality of project results, conclusions and recommendations;
5. To identify differences in results, conclusions and/or recommendations that would affect regional implementation and practice;
6. To review implementation status of individual state project results and recommendations;
7. To recommend applicability of applying research results to other states within the southeast region;
8. To recommend additional research (if needed) to enhance implementation within the region.
9. To organize, evaluate, and document the useful information acquired.

Each synthesis is written under the oversight of a technical project review committee (PRC) appointed for that specific topic. The PRC and LTRC staff will review and make recommendations regarding the report's technical adequacy and acceptability for publication, with approval of the STC Board. Synthesis reports are attributed to their authors, with recognition given to the PRC. The aim of a synthesis, first and foremost, is to get the facts out about what is going on with respect to a specific synthesis topic. In addition to this factual documentation, reviews of the state of the practice inevitably provide a basis for the author or authors to make conclusions or assessments about:

- Research results and current practice, including implementation of research recommendations;
- Current practices that appear to be working well and those that are not working well;
- Current practices that are at odds with research findings;
- Critical knowledge gaps that could be filled by additional research; and
- Other actions—e.g., training, revised standards, and increased management attention that could improve the state of the practice in a given area.

Such conclusions and assessments are helpful provided that they are well supported and clearly documented in the report. Accordingly, it is desirable that they be incorporated to the maximum extent possible. The reports must, however, stay clear of any recommendations (other than for needed research) that cannot be justified by the technical assessment mission of these reports.

It is important to recognize that the purpose of this synthesis is to document and describe the current research performed and how it has affected current practice in a given area and /or state. It is acceptable for the synthesis to highlight practices that are viewed as successful by many of the entities surveyed in developing the synthesis, or that are characterized as such in the literature reviewed by the synthesis author. The only recommendations that are permitted in the synthesis are recommendations for needed research and recommendations from the region studies reviewed.

GENERAL GUIDELINES

One size fits all rules or guidelines clearly are not possible for such a variety of reports, but a few general guidelines are useful. These guidelines, while focused in particular on the final section of a synthesis, are intended to apply in spirit to the whole body of the report. It is also recognized that instances may arise in which there is good reason to deviate from these guidelines; such exceptions are handled on a case-by-case basis.

Synthesis reports should be descriptive, not prescriptive. Potentially sensitive issues that require careful handling are likely when one or more of the following criteria apply:

- Widespread polarization of opinion already exists on the subject;
- There are strong commercial interests in the subject, and the findings or conclusions might favor or injure particular commercial interests; or
- The subject involves health, safety, or environmental issues (issues where public policy involves trade-offs among multiple objectives).

The final chapter of the synthesis report should be titled *Conclusions and Recommendations*. Conclusions summarize facts about, and technical assessment of, the research projects reviewed and current state of the practice; any assessment of research results and current practice must be supported by the contents of the report and stated carefully. Statements about barriers to widespread implementation of promising methods or practices (e.g., lack of consistent standards) should be presented as an observation or conclusion rather than a recommendation. Recommendations for needed research generally should be limited to recommendations about where important knowledge gaps exist that could be corrected by research. Subject matter is important. The authors may have more latitude to draw conclusions for topics that are mostly technical (e.g., bridge welds) as opposed to topics where there are clearly policy implications (e.g., state license fees, warranties for road construction). The research recommendations should appear in the final *Conclusions* chapter.

SPECIAL NOTES

- A. Objectives and Guidelines are intended to provide a framework for conducting the research. LTRC is seeking the insight of proposers on how best to achieve the synthesis objectives. Proposers are expected to describe specific tasks and work plans that can be realistically accomplished within the constraints of available funds and contract time. Proposals must present the candidate's current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach.
- B. The proposal shall include travel for a presentation to the STC members at the annual meeting to be held at LTRC in Baton Rouge, LA. The annual meeting is generally held in October.
- C. Proposers are encouraged to visit the STC website and project database for additional information at <http://www.ltrc.lsu.edu/stc/>
- D. To equitably answer any questions regarding this Request for Proposals, the Louisiana Department of Transportation and Development (LADOTD) website, <http://notes1/agrestat.nsf/WebAdvertisements?OpenPage> will be updated with questions and answers and related documents regarding the project. The LADOTD makes these documents available for informational purposes only to aid in the efficient dissemination of information to interested parties. The LADOTD does not warrant the documents against deficiencies of any kind. The data contained within this web site will be periodically updated. Interested parties are responsible to be aware of any updates. Questions regarding this RFP should be submitted in writing to the LTRC contact person. Questions must be received by close of business seven calendar days prior to deadline date.

- E. Consultants and academic institutions shall be registered with the Secretary of State in order to be able to work in Louisiana prior to award of contract.
<http://www.sos.la.gov/Home/Commercial/Corporations/SearchDatabase/tabid/819/Default.aspx>

CONTRACT TIME

12 Months (*a draft final report will be due in 9 months; the additional three months will be for review and approval of the final report*).

COST

\$30,000 (Indirect costs shall not exceed 25% as outlined in the LTRC Manual of Research Procedures)

AUTHORIZATION TO BEGIN WORK

March 2012 (estimated)

PROPOSAL FORMAT

All proposals must be formatted according to LTRC Research Manual, 2003 edition (http://www.ltrc.lsu.edu/pdf/research_man03.pdf). One copy of the proposal shall be submitted. The proposal shall not exceed 10 pages including the standard pages described in the LTRC Manual of Research Procedures Parts I – VII as amended in the attachment (Proposal title page, budget, bio+7 pages of narrative). Proposals exceeding the page limit will be returned without review.

PROPOSAL SELECTION

A Project Review Committee selected for this project will review, evaluate and rank all proposals received employing the criteria listed in the proposal review form shown in figure 2-6 in the LTRC Research Manual. The Project Review Committee will also review progress on the project and will review and comment on the final report.

DEADLINE FOR RECEIPT OF PROPOSAL

Ten copies of the proposal must be received by LTRC by the close of business January 31, 2012. Proposals to be submitted to:

Mr. Harold Paul
Director
Louisiana Transportation Research Center
4101 Gourrier Ave.
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LTRC CONTACT PERSON

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